National Standards Commission



Supplementary Certificate of Approval

No S280A

Issued under Regulation 9 of the National Measurement (Patterns of Measuring Instruments) Regulations

This is to certify that an approval for use for trade has been granted in respect of the

Compac Industries Model C3000H Calculator/Indicator for Fuel Dispensers for Motor Vehicles

submitted by Compac Industries Limited 52 Walls Road Penrose Auckland New Zealand.

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

This Certificate is issued upon completion of a review of NSC approval No S280.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 March 2004 and then every 5 years thereafter.

S280A 13 October 1999 Supplementary Certificate of Approval No S280A

No S280A and only by persons authorised by the submittor.

Instruments purporting to comply with this approval shall be marked NSC

Instruments incorporating a component purporting to comply with this approval shall be marked NSC No S280A in addition to the approval number of the instrument.

It is the submittor's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the Commission and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with the Commission's Document 106.

The Commission reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificate No S1/0/A.

DESCRIPTIVE ADVICE

Pattern: approved 12 February 1999

 A Compac Industries model C3000H electronic calculator/indicator for use in compatible Commission-approved fuel dispensers for motor vehicles.

Variant: approved 12 February 1999

1. Displaying volume only.

Technical Schedule No S280A describes the pattern and variant 1.

FILING ADVICE

The documentation for this approval comprises:

Supplementary Certificate of Approval No S280A dated 13 October 1999 Technical Schedule No S280A dated 13 October 1999 (incl. Test Procedure) Figures 1 and 2 dated 13 October 1999

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Measuring Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.

then

TECHNICAL SCHEDULE No S280A

Pattern:Compac Model C3000H Calculator/Indicator for Fuel Dispensers
for Motor Vehicles.

Submittor: Compac Industries Limited 52 Walls Road Penrose Auckland New Zealand.

1. Description of Pattern

A Compac Industries model C3000H electronic calculator/indicator (Figures 1) for use in compatible Commission-approved fuel dispensers for motor vehicles, incorporating a Compac Industries model CU-ENCODER-3CH pulse generator (Figure 2) or any other compatible Commission-approved pulse generator.

1.1 Features

The C3000H calculator/indicator may be used in attendant-operated mode, or attended or unattended self-serve mode. In the latter case, the instrument is connected to a compatible Commission-approved authorising device to activate the fuel dispenser.

The pattern incorporates a pre-set facility for use with fuel dispensers which are Commission-approved for pre-set deliveries.

The C3000H calculator/indicator comprises a calculator unit and separate display units. Each calculator unit may be connected with up to 3 single or double-sided display units.

1.2 Calculator/Indicator Display

The display unit uses 3 separate liquid crystal displays, which indicate the price, volume and unit price respectively.

Price	Up to \$999.99 or \$9999.99 in \$0.01 increments
Volume	Up to 999.99 L or 9999.99 L in 0.01 L increments
Unit price	Up to 9.999 \$/L in 0.1 c increments

1.3 Unit Price Setting

When used in attendant-operated mode, unit price setting is by means of a switch located inside the calculator/indicator unit.

1.4 Pulse Generator

A model CU-ENCODER-3CH pulse generator (Figure 2) is a three channel pulse output device, each channel producing 25 pulses per shaft revolution. When interfaced to the model C3000H calculator/indicator, the volume display indicates 150 counts per shaft revolution.

The pulse generator specifications are:

Maximum pulser shaft speed:	600 revolutions/minute
Pulse output:	25 pulses/revolution/channel

1.5 Verification/Certification Provision

Provision is made for the application of a verification/certification mark.

1.6 Sealing Provision

The K-factor (electronic calibration) switch, which is located inside the calculator/ indicator unit, has provision for sealing.

1.7 Markings

Instruments are marked with the following data, together in one location:

Manufacturer's name or mark	Compac Industries
Model number	C3000H
Serial number	
NSC approval number	S280A
Year of manufacture	
Operating (air) temperature range	-25°C to +55°C

NOTE: Refer clause **2. Description of Variant 1** for details of notice required for variant 1.

2. Description of Variant 1

Displaying volume (litres) only (Figure 1), provided the instrument carries a notice stating "NOT FOR PUBLIC USE" (or similar wording), in capital letters not less than 6 mm high, either on or adjacent to each reading face.

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TEST PROCEDURE

Instruments shall be tested in conjunction with any tests specified in the approval documentation for the instrument to which the pattern is connected, as appropriate, and in accordance with any relevant tests specified in the Inspector's Handbook.

The maximum permissible errors applicable are those applicable to the fuel dispenser to which the pattern is connected, as stated in the approval documentation for the dispenser.



FIGURE S280A - 1

